Maryland Historical Trust

Maryland Inventory of Historic Properties Number: WA-II-1113.

Name: 21015/MS 40 OVER LANDIS SPRING BR.

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridged received the following determination of eligibly.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X____ Eligibility Not Recommended _____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments:_____

_____

_____

Reviewer, OPS:__Anne E. Bruder_____ Date:__3 April 2001_____

Reviewer, NR Program:_Peter E. Kurtze_____ Date:___3 April 2001_____

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No. WA-II-1113**
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. 21015 **Bridge name** US 40 over Landis Spring Branch

LOCATION:
Street/Road name and number [facility carried] US 40

City/town Hagerstown **Vicinity** X

County Washington

This bridge projects over: Road ____ **Railway**____ **Water** X___ **Land** ____

Ownership: State ___X____ **County** ___ **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is bridge located within a designated historic district? Yes _____ **No** X_____
National Register-listed district _____ **National Register-determined-eligible district** _____
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ____ **Trestle** _____ **Timber-And-Concrete** ____

Stone Arch Bridge ___

Metal Truss Bridge ___

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** _____ **Bascule Multiple Leaf** ___
Vertical Lift __ **Retractile** _____ **Pontoon** _____

Metal Girder _____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension ____

Metal Arch ___

Metal Cantilever _____

Concrete X___:
Concrete Arch_____ **Concrete Slab**_____ **Concrete Beam** _____ **Rigid Frame** X_____

Other _____ **Type Name** _____

WA-II-1113

DESCRIPTION:

Describe Setting:

Bridge 21015 carries US 40 over Landis Spring Branch in a northeast/southwest direction. The bridge is located in the Hagerstown, Maryland area. The spring flows in a southeastern direction. The area is generally flat and vegetated. There is a small business on the northwest approach. The road splits into a divided highway at the northwest approach also.

Describe Superstructure and Substructure:

Bridge 21015 is a single span concrete rigid frame with a clear span of 32'-0". The bridge is on an 18° skew. The clear width of the roadway is 40'. Parapets are stone masonry walls topped with concrete caps. Stone masonry covers the outside face of the superstructure. The underside of the arch is concrete finished. The substructure consists of abutments and wingwalls that are reinforced concrete with stone facing on the outside of the wingwalls. There is a layer of stone backfill behind each abutment. Spread footings support abutment and wingwalls. To add visual interest to the structure, the stone at the outside face is stepped back and the elliptical arch of the span is outlined in large stone blocks.

Discuss Major Alterations:

No major alterations have been made to this extremely intact bridge.

HISTORY:

WHEN was bridge built (actual date or date range) 1936
This date is: Actual X **Estimated** _____
Source of date: Plaque _____ **Design plans** X **County bridge files/inspection form** _____
Other (specify) SHA Files

WHY was bridge built? To provide a reliable crossing of US 40 over Landis Spring Branch, to meet local and regional transportation needs via the construction of a modern highway. According to plans, bridge did not replace and earlier structure.

WHO was the designer State Roads Commission

WHO was the builder _____

WHY was bridge altered? [check N/A X **if not applicable]**

Was bridge built as part of organized bridge-building campaign? Yes X **No** _____

This bridge was built by the State Roads Commission as part of the Good Roads Movement and the construction of a new Route 40.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events X **B- Person** _____
C- Engineering/architectural character X

Was bridge constructed in response to significant events in Maryland or local history? No_ Yes X

This bridge was one of a small number of concrete rigid frame bridges erected in Maryland in the 1930s and 1940s. Its monolithic frame reflects advances in reinforced concrete structural engineering in the early twentieth century. These bridges were built throughout the state, primarily by the State Roads Commission and the city of Baltimore, as part of the Good Roads Movement. This bridge, along with bridges 21013 (1941) and 21015 (1936) in Washington County and 13032 (1939) in Howard County, was erected as part of the construction of U.S. 40 by the State Roads Commission in the 1930s, one of Maryland's early major highway projects.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area? No ____ Yes X

U.S. 40, an early major highway project in the state, had a significant impact on residential, agricultural, commercial, and industrial growth in Maryland along its path from Aberdeen through Baltimore and west to Frederick.

Is the bridge located in an area which may be eligible for historic designation? No X Yes _____
Would the bridge add to _____or detract from _____historic & visual character of the possible district?

Is the bridge a significant example of its type? No __ Yes X

Concrete bridges are the largest component of Maryland's historic bridges. Their numbers reflect how quickly they became popular after their introduction to the state and the country at the opening of the twentieth century. Many in Maryland are purely functional structures, but their plastic nature made them amenable to graceful curves and ornamental parapets that reflected the influence of the City Beautiful movement during the first part of the twentieth century. The versatility and strength of reinforced concrete bridges, along with their plasticity, made them the preferred choice for bridges by state and county highway departments in Maryland and throughout the country in the 1910s. The standard plans of the State Roads Commission of the teens, twenties, and thirties made their use almost universal during that period.

While concrete bridges as a whole are very common in Maryland, reinforced concrete rigid frame bridges make up one of the smallest groups of historic bridge types in the state. There are probably only about a dozen such structures standing in the state under county or state control that were erected prior to 1945. The rigid frame bridge, unlike other reinforced concrete spans, is monolithic. It is characterized by a superstructure and substructure, including abutments, designed as a continuous unit. (Concrete balustrades, cast afterwards, are not part of the monolithic design.) The rigid frame was an important engineering advance for reinforced concrete bridges. It was developed by German engineers and Brazilian Emilio Baumgart around 1920, and introduced to the United States primarily through the efforts of New York engineer Arthur G. Hayden in 1922-1923.

Concrete rigid frame bridges became increasingly popular in the 1930s and 1940s. It was during this period that Maryland's few examples of the type were erected. These include bridges 1030 (1937, 1992) in Allegany County; BC-1406 (1938) and BC-3402 (1940) in Baltimore City; 5013 (1936) in Caroline County (1936); 6031 (1934) in Carroll County ; 10058 (1941) in Frederick County; 11018 (1937) in Garrett County; 13032 (1939) in Howard County; 21013 (1941), 21015 (1936), and 21016 (1936) in Washington County; and WO-801 (c.1930) in Worcester County. These bridges generally have one or two spans of between 30 and 60 feet; the longest, BC-1406, measures 68 feet. With the exception of WO-801, the history of which remains clouded, they were built by the state or the city of Baltimore.

The stone facing and arches of this bridge, and of fellow Route 40 Washington County bridges 21013 and 21016, are purely decorative elements that provide an architectural character not found at the state's other concrete rigid

frame bridges. They were added to these bridges to emulate the appearance and finish of the original nineteenth-century stone-arch bridges of the National Pike.

This bridge falls within the 1910-1940 period of significance for concrete bridges, during which reinforced concrete bridge construction was increasingly standardized in the state and particular subtypes, including the rigid frame, were introduced to the state road network.

Does bridge retain integrity [in terms of National Register] of important elements described in Context Addendum? No ____ Yes X____

Is bridge a significant example of work of manufacturer, designer and/or engineer? No__ Yes X

The combination of a rigid frame, handsome stonework and articulation, and two similar bridges located on the same route show the sensitivity of state engineers and designers to engineering advances, major parkway design, and aesthetics.

Should bridge be given further study before significance analysis is made? No X Yes _____

It is believed that no further research is necessary to determine the eligibility of this bridge for listing in the National Register. It should be compared with the other concrete rigid frame bridges listed above and a determination should be made whether all of them (excluding 1030 in Allegany County, 13032 in Howard County, and WO-081 in Worcester County, which have lost their integrity) are eligible to the Register because of their rarity and/or good representation of the type, or just the best examples. Additional research, however, which could be conducted as part of any future National Register nomination prepared for the bridge, might provide further information about its history and environs.

BIBLIOGRAPHY:

Bridge inspection reports and files of the Maryland State Highway Administration.

Condit, Carl. *American Building*. Chicago: University of Chicago Press, 1968.

County survey files of the Maryland Historical Trust.

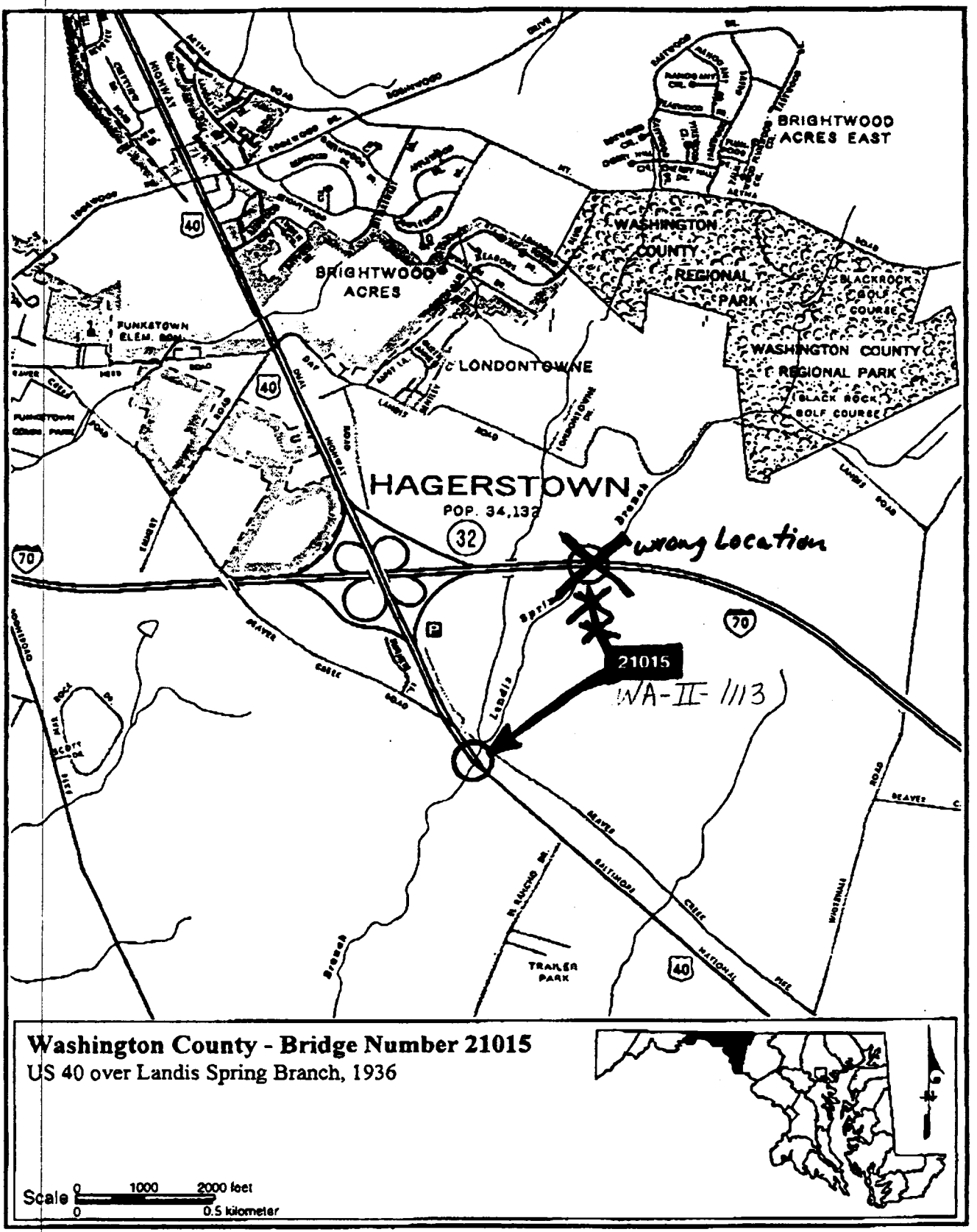
P.A.C. Spero & Company and Louis Berger & Associates, Inc. *Historic Bridges in Maryland: Historic Context Report*. Prepared for the Maryland State Highway Administration, September, 1994.

SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 2/23/95

Name of surveyor David King/Marvin Brown
Organization/Address GREINER, INC., 2219 York Road, Suite 200, Timonium, Maryland 21093-3111
Phone number 410-561-0100 **FAX number** 410-561-1150

WA-II-1113


BRIGHTWOOD ACRES EAST
WASHINGTON COUNTY REGIONAL PARK
BRIGHTWOOD ACRES
BLACKROCK GOLF COURSE
WASHINGTON COUNTY REGIONAL PARK
BLACK ROCK GOLF COURSE
LONDONTOWNE
HAGERSTOWN
POP. 34,132
wrong Location
21015
WA-II-1113
TRAILER PARK
Washington County - Bridge Number 21015
US 40 over Landis Spring Branch, 1936
Scale 0 1000 2000 feet
0 0.5 kilometer

WA-II-1113

BR # ~~21015~~ 21015

OVER BRANCH OF LITTLE SPRING

WASHINGTON CO., MD

DAVID KING

2/23/95

S. H. A.

NORTHWEST APPROACH

1 OF 4

MA-II-1113

BR #2107540 2105

OVER BRANCH OF LANDIS SPRING

WASHINGTON CO., MD

DAVID KING

2/23/95

S. H. A.

NORTHEAST ELEVATION (UPSTREAM)

2 OF 4

WA-II-1113

BR #~~21015~~ 21015

OVER BRANCH OF LANDIS SPRING

WASHINGTON CO., MD.

DAVID KING

2/23/95

S. H. A.

SOUTHWEST ELEVATION (DOWNSTREAM)

3 OF 4

WA-II-1113

BR# ~~21540~~ 21015

OVER BRANCH OF LANDIS SPRING

WASHINGTON CO., MD.

DAVID KING

2/23/95

S. H. A.

SOUTHEAST APPROACH

4 OF 4